

Application No. 10/577,332  
Amdt. dated 23 May 2008  
Reply to Office action of February 25, 2008

### REMARKS

Applicants submit this Amendment in response to the Office Action, dated February 25, 2008. Applicants have amended Claims 1, 14 and 17 and cancelled Claim 13. Claims 1-12 and 14- 28 remain pending in the application. Claim 1 has been amended to incorporate the text of former Claim 13. The dependency of Claims 14 and 17 has been amended from dependency on former Claim 13 to dependency on Claim 1. Support for the amendment of Claim 1 is found in former Claim 13. Applicants respectfully request entry of the claim amendments.

In the Office Action, Claim 24 was rejected as being indefinite. The phrase "non-Darcy flow" was indicated as failing to make sense and the phrase "the Ergun equation" was rejected as lacking antecedent basis. With respect to the phrase non-Darcy flow, Applicants direct the Examiner to page 13, paragraph 29 of the specification, where the Applicants have explained that the phrase non-Darcy flow refers to a flow condition in which the  $v^2$  term of the well-known Ergun equation contributes greater than 25% of the pressure drop from such flow. Applicant's submit that the claim phrase together with the explanation in the specification make the meaning of this phrase clear.

With respect to the cited lack of antecedent basis for use of the preposition "the" in reference to the first use of "Ergun equation" applicants submit that the use of the preposition "the" is proper in patent claims when introducing a property of a thing such as a flowing fluid. For example, MPEP §2173.05(e) states that:

Inherent components of elements recited have antecedent basis in the recitation of the components themselves. For example, the limitation "the outer surface of said sphere" would not require an antecedent recitation that the sphere has an outer surface.

Applicants submit that a flowing fluid as described in the specification necessarily has a value for the Ergun equation which may be calculated as explained in the specification and as is know in the art. Further the use of "the" to introduce the phrase "Ergun equation" is proper under the MPEP in such a situation. Applicants

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respectfully request withdrawal of the two indefiniteness rejections cited in the Office Action.

The Office Action rejected Claims 1-3, 5-9, 11, 12, 18-20, 22-25, 27 and 28 as obvious under 35 USC §103 over Butler (U.S. 4,344,485) in view of Nordgren (U.S. 3,500,913). Further, Claims 4, 10, 13-17, 21 and 26 were indicated as being allowable if rewritten in independent form. Claim 1 has been amended herein to incorporate the text of previous Claim 13. Applicants submit that all the claims of the current application are in condition for allowance and respectfully request allowance of the application.

If the Examiner wished to discuss the amendments to the claims or explanations contained in this Amendment, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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